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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,721

11/29/2006

Ewald Schneider

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EXAMINER

LEE, DORIS L

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/23/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,721	<b>Applicant(s)</b> SCHNEIDER, EWALD	
	<b>Examiner</b> Doris L. Lee	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11,13-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11,13-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 9, 2009 has been entered.
2. All outstanding objections and rejections, except for those maintained below, are withdrawn in light of applicant's amendment filed on March 9, 2009.

### ***Claim Objections***

3. **Claim 14 and 15** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

**Regarding claim 14**, the limitations of the periodical units are broader than that that of claim 11 from which claim 14 depends from.

**Regarding claim 15**, the limitation of the periodic units, particularly the limitation "p-xylylenediamine and m-xylylenediamine" runs counter to the limitations in claim 11 which states that the diamine is hexamethylene diamine.

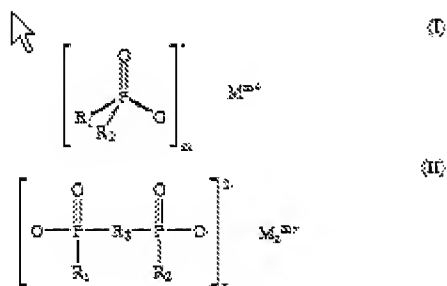
### ***Claim Rejections - 35 USC § 103***

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4. **Claim 11, 13-15, and 17-20** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saga (US 2005/0113496)** in view of **Sugino et al (US 5,895,607)** and **Schmid et al (US 4,963,610)**.

**Regarding claim 11, 14 and 18**, Saga teaches a flame resistant polyamide resin composition comprising:

- 8 to 89.1 % of a polyamide ([0008]) which can be a mixture ([0015]) of aliphatic polyamides ([0017]) and partly aromatic polyamides ([0017]), the aromatic polyamides are selected from the group consisting of polyamides, the periodical units of which are derived from terephthalic acid and isophthalic acid and adipic acid and also hexamethylene diamine ([0017]).
- 5 to 50 % of a flame retardant comprising a phosphinate of the formula (I) and/or a diphosphinate of formula (II)



- up to 60 wt % of fiber or particle like filler, such as carbon fibers ([0036])
- and additional additives ([0037]) such as pigments and stabilizers.

However, Saga fails to teach the exact amount of the aliphatic polyamide and the exact amount of aromatic polyamides as recited in the instant claim. Saga also fails to teach the amount of the additional additives.

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Sugino teaches a flame retardant polyamide composition (Abstract) in which 10 to 90 parts by weight of the partly aromatic polyamide and 90 to 10 parts by weight of aliphatic polyamide (col. 3, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the amounts of the partly aromatic polyamide and the aliphatic polyamide of Sugino as the polyamide blend of Saga. One would have been motivated to do so in order to receive the expected benefit of improving the impact resistance of thin casings (Sugino, col. 2, lines 40-47).

Schmid teaches a flame resistant polyamide molding composition (Abstract) which contains up to 20% of the usual additives, including pigments and stabilizers (col. 4, lines 50-60).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the amount as taught by Schmid of the additives as taught by Saga. One would have been motivated to do so in order to properly color or stabilize the polyamide material. They are combinable because they are concerned with the same field of endeavor, namely polyamide molding compositions.

**Regarding claim 13**, Saga teaches that the aliphatic polyamides can be polyamide 6, polyamide 66, polyamide 46, polyamide 11, or polyamide 12 ([0017]) which meets the claimed limitations as stated in the specification on page 5, first paragraph.

**Regarding claims 14 and 15**, Saga teaches that the partly aromatic polyamides can be polyamide MXD6, polyamide 12T, polyamide 10T, polyamide 9T, polyamide

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6T/66 ([0017]) which meets the claimed limitations as stated in the specification on page 5, second paragraph.

**Regarding claim 17**, Saga teaches that the flame proof polyamide molding compound wherein a phosphinic acid salt of formula (I) an disphosphinc acid salt of formula (II) (see rejection of claim 11 above) wherein M is calcium or aluminum ions ([0010]) is used as a flame proofing agent ([0009]).

**Regarding claim 19**, Saga teaches that the composition elucidated in claim 11 above can be made into molded articles via any known manufacturing method ([0039]).

**Regarding claim 20**, as modified Saga teaches all the components of the composition, therefore, it is therefore inherent that the prior art composition has the desired flame retardancy since such a property is evidently dependent upon the nature of the composition used. Case law holds that a material and its properties are inseparable. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

### ***Response to Arguments***

5. The rejections set forth under USC 112, 2<sup>nd</sup> paragraph in paragraph 5 of the Office Action mailed on December 9, 2008 has been withdrawn in light of the applicant's amendment filed on March 3, 2009.

6. The terminal disclaimers filed on March 9, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of application 10/553,259 has been reviewed and is accepted. The terminal disclaimer has been recorded and the outstanding obviousness-type double patenting rejections are withdrawn.

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Since reference Sugino has been carried over from the preceding action, it is appropriate to address applicant's arguments concerning them.

8. **Applicant's arguments:** Sugino teaches a flame retardant such as red phosphorus and the present invention avoids the use of red phosphorus.

**Examiner's response:** *As an answer to the argument, Sugino teaches red phosphorous as a preferred flame retardant and not the only flame retardant that can be used. Actually, any known flame retardant can be used (col. 5, line 50). However, Sugino now is the secondary reference, used only to teach the blend of aliphatic and partially aromatic polyamide and the red phosphorus does not play a role in the present rejection set forth above.*

9. **Applicant's arguments:** Applicants refer to the data in Table 1 and Table 2 which indicates a significant improvement in the mechanical properties of the inventive moldings as opposed to the known moldings. It also shows that the moldings of the present invention fulfill the requirements of the inflammability test, even though the percentage of fireproofing agents is much lower than in comparable known moldings.

**Examiner's response:** *Applicant points out the significant improvement of mechanical properties of the inventive examples versus the comparative examples, however, there is no way to make a proper side by side comparison between the comparative examples and the inventive examples because the comparative example uses only one type of polyamide rather than the blend of polyamides used in Examples 1 and 2 and as most of the mechanical properties of the composition would be due to the polyamide*

*blends, it would be necessary to see the breaking elongation of a blend of the polyamides with the flame retardant amount outside the claimed range to see if the elongation is indeed unexpected.*

*Regarding the flame retardancy data, in order to provide support for unexpected results over the scope of the claim, it is necessary to provide data that is commensurate in scope with the data, which the applicant has not provided in Table 1 or Table 2. For example, the limitations in claim 1 state that the flame proofing agent is apparent in an amount from 1 to 15 % by weight of the flame retardant, yet the data provides information for only a small range of the claimed range (12-15 wt %). Also, claim 11 generically claims for aliphatic polyamides, whereas the data is provided for only polyamide 6 and polyamide 66.*

### **Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doris L. Lee whose telephone number is (571)270-3872. The examiner can normally be reached on Monday - Thursday 7:30 am to 5 pm and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Doris L Lee/  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796